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REMARKS

Claims 1-8, 10, and 12-18 are all the claims presently pending in the application.

Claims 1-2, 4-5, 7-8, and 10-13 are amended to more clearly define the invention and claims.

No new matter has been added. Claims 9 and 11 have been cancelled. Claims 1, 8, 10, 14, 19, and 21 are independent.

Claims 1-6 and 8-17 are rejected under 35 U.S.C. § 102(e) as being anticipated by Matsumoto et al. Claim 7 stands rejected under 35 U.S.C. § 103(a) as allegedly being obvious with respect to Matsumoto et al. and in view of the Examiner's "official notice."

These rejections are respectfully traversed.

I. THE CLAIMED INVENTION

An exemplary embodiment of the claimed invention, as defined by, for example, independent claim 1, is directed to a stereoscopic image processing apparatus for calculating a parallax between a pair of images that includes correlation evaluating means for evaluating a correlation of brightness between a first pixel block provided in one of the pair of images and a second pixel block provided in the other of the pair of images and region size changing means for changing a size of the first and second pixel blocks in evaluating said correlation.

Further, in some embodiments, a boundary determining section may determine a boundary between two portions of the images. For example, the boundary may be the horizontal boundary between the road and objects above the road. The invention preferably calculates a parallax differently for objects on either side of the boundary. In other embodiments, the parallax is calculated differently based on ambient conditions, such as the weather.

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II. REQUEST FOR INFORMATION

The Office Action requests a requirement for information relying on 37 C.F.R. 1.105 to justify the requirement. Applicant does not reply to the requirement for information because this requirement for information is not proper. Applicant points out that, as described in MPEP 704.10, this requirement for information is not reasonably necessary to this examination. First, MPEP 704.11 states that a requirement for information is not a substitute for the examiner performing a search. Applicant points out that the information sought by the Examiner are questions concerning potential prior art that the Examiner is required to search for under MPEP 904-904.03. That is, the Examiner is clearly asking Applicant to perform his duties. Such a request is outside the scope of 37 C.F.R. 1.105 as defined by 35 U.S.C. §131 and 132 as well as section 704.10 of the MPEP.

Second, MPEP 704.14 states that the request must be narrow. Instead, Applicant points out that the requirement extends from page 2 to page 5 of the Office Action. The request covers almost every aspect of the application. Therefore, Applicant points out that the subject matter of the requirement for information falls outside the boundaries defined in MPEP 704.11(a).

Further, MPEP section 704.12, III, states that it is improper to require information after the first action on the merits. In fact, requirements for information are even less appropriate in a final office action. That is, by requesting this information, the Examiner appears to imply that he will undertake further action despite the fact that no further action is required by a final action. As the Office Action of October 29, 2007 was a final action, Applicant does not believe it is necessary or proper to respond to the requirement for information. Accordingly, Applicant submits that this reply is complete under MPEP 704.12(b).

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III. THE ALLEGED PRIOR ART REJECTIONS

The Office Action rejects claims 1-6 and 8-18 under 35 U.S.C. §102(e) as being anticipated by Matusmoto et al. (referred to as Matsumoto). Further, the Office Action rejects claim 7 under 35 U.S.C. §103(a) under Matusmoto. Applicant respectfully traverses these rejections for the following reasons.

Claim 1

Independent claim 1 recites, among other things, region size changing means for changing a size of first and second pixel blocks for the correlation evaluating means. On page 7 of the Office Action, the Office Action alleges that Matsumoto “teaches altering the size of pixel blocks.” The Office Action cites paragraphs 99-115, and 139 (discussing Embodiment 1) and 307-308, and 323, (discussing Embodiment 5) to support the allegation that Matsumoto teaches “altering the size of pixel blocks.”

Overall, Matsumoto is directed to the creation of stereographic images from single time elapsed photos. That is, two or more photos are compared to each other to determine motion. From that motion, a parallax value can be determined and then left and right images can be created. Conceptually, therefore, Matsumoto is **exactly the opposite of** what the present application discloses. Thus, for example, claim 1 is directed to, among other things, determining a parallax by interpreting two simultaneous, stereographic images that are offset from each other. Thus, whereas claim 1 recites stereographic images, Matsumoto is directed to processing information from single, time elapsed images. Accordingly, Matsumoto does not disclose the stereographic imaging as recited in claim 1.

With respect to Embodiment 5, Matsumoto discloses that Embodiment 5 is modified from Embodiment 1 by attempting to create a flat image from received and hypothetical data.

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See Matsumoto, paragraph 316. That is, Embodiment 5 does not discuss or disclose the relevant portions of claim 1.

Next, Applicant notes that rejections under 35 U.S.C. §102(e) require that all the elements of a claim be present in the alleged prior art to properly anticipate that claim. With respect to claim 1, the Office Action does not account for every element as claimed. In particular, the Office Action appears to ignore the elements of claim 1 by summarizing the claim language of "region size changing means for changing a size of said first and second pixel blocks for said correlation evaluating means" into a broader meaning of "altering the size of pixel blocks." A rejection under §102 does not allow the Examiner to substitute elements or the claimed relationships among the elements in establishing a rejection. Further, paragraphs 99-115 of Matsumoto describe Steps 11 and 12, including "Setting a Corresponding Point Candidate Area," of the method described in FIG. 5. FIGS. 6-8 then illustrate the point candidate area. Contrary to the stereographic images recited in claim 1, the two images of Matsumoto are not stereographic but rather two images delayed by times t and t'. See Matsumoto, Paragraph 106. That is, Matsumoto does not teach stereographic imaging at the portions indicated by the Office Action. Accordingly, Matsumoto does not teach or suggest setting a pixel block size for stereographic images as recited in claim 1.

Where Matsumoto does address pixel block comparisons, the disclosure thereof does not describe or disclose the apparatus as recited in claim 1. For example, on page 7 of the Office Action, it is alleged that Matsumoto teaches "altering the size of pixel blocks." With respect to this particular element of claim 1, Applicant notes that the Examiner appears to be improperly broadening the meaning of the claim language. The Office Action essentially ignores the language of most of the claims and injects his own meaning. Despite the change in meaning of claim 1, Applicants note that at paragraph 97, Matsumoto recites that

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the “[f]rame t is divided into every 8X8 pixels by overlaying it with a grid.” That is, instead of “altering the size of pixel blocks,” Matsumoto appears to teach **only a single pixel block size**. That is, Matsumoto does not even appear to disclose the broader meaning that the Office Action ascribes to it.

Nonetheless, Applicant submits that contrary to the argument provided on page 6 of the Office Action, Matsumoto does not disclose “the changing in size of pixel blocks, which are used in evaluating a correlation of brightness.” Applicant submits that the Office Action supports this allegation by citing paragraphs 99-115 and 138-139. Contrary to the assertions contained within the Office Action, however, Matsumoto at paragraph 107 does discuss a “block matching method.” Paragraphs 108 through 111 further disclose this method as illustrated in FIG. 7. And indeed, paragraph 115 does disclose that a pixel block may be as large as 16X16. But, unlike the invention as recited in claim 1, Matsumoto does not disclose any region size changing means for changing this size of the first and second pixel blocks as recited in claim 1. The only valid conclusion is that these pixel sizes are set for a particular embodiment and do not change and therefore cannot disclose the changing of pixel block size as recited in claim 1.

Paragraphs 112 through 115 Matsumoto describe FIG. 8 where a corresponding point between the two images is approximately found. Paragraphs 122 to 133 describe “characteristic points,” where Matsumoto attempts to locate easily determined positions in images, such as corners of buildings. Throughout this disclosure, the block matching method described by Matsumoto does not include a pixel block size that changes as recited in claim 1.

Accordingly, because Matsumoto does not teach every element as claimed in amended independent claim 1, claim 1 is improperly rejected in light of Matsumoto.

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Accordingly, Applicant submits that claim 1 is in condition for allowance. With respect to claims 2-7 and 15-18, which depend from independent claim 1, each of these claims contain all the limitations contained within claim 1 and are therefore also in condition for allowance.

Claim 8

Amended independent claim 8 recites, among other things, a stereoscopic image processing apparatus including correlation evaluating means for evaluating a correlation of brightness between a first pixel block provided in one of said pair of images and a second pixel block provided in the other of the pair of images, weighting factor means, and weighting factor changing means to change the weighting factor, wherein said weight factor is established to 0 at a surrounding region around a central region of said first and second pixel blocks.

Contrary to amended independent claim 8, the Office Action alleges that Matsumoto discloses the weight factor, among other things, at paragraphs 99-115 and 135-155. Further, with respect to cancelled claim 9, which has been incorporated into claim 8, Applicant submits that Matsumoto does not provide any disclosure of weighing the pixels illustrated in FIG. 7. Instead, each pixel is apparently measured without any weighing or consideration of that pixel's relative position in reference pixel block. The Office Action appears to allege that the gray scale measuring for each pixel is the weighting factor recited in claim 8. Instead of a grayscale, however, the weighting factor, as recited in claim 8, is a value apart from the actual content of the pixel. Rather, the weighting factor is applied to each pixel to adjust the size of the pixel block. The Examiner appears to conflate "gray scale matching" with a weighting factor as recited in claim 8.

Accordingly, because Matsumoto does not teach every element as claimed in

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amended independent claim 8, claim 8 is improperly rejected in light of Matsumoto.

Accordingly, claim 8 is in condition for allowance.

Claim 10

Amended independent claim 10 recites, among other things, a stereoscopic image processing method that includes evaluating a correlation of brightness between a first pixel block provided and a second pixel block and changing a size of the first and second pixel blocks so that the first and second pixel blocks change in accordance with an area in which the first pixel block is located.

Contrary to amended independent claim 10, Matsumoto does not teach changing a size of the first and second pixel blocks so that the first and second pixel blocks change in accordance with an area in which the first pixel block is located during an evaluating of a correlation of brightness between a first pixel block and a second pixel block. Rather, Matsumoto shows the block matching method illustrated in FIG. 7. As described above with respect to claim 1 and 8, block matching does not disclose, and is not the same element, as changing the size of the pixel block as recited in independent claim 10.

In addition, as described above with respect to claim 1, Matsumoto is directed to time delayed and not stereographic block matching. That is, Matsumoto does not teach stereographic images as recited in independent claim 10.

Accordingly, because Matsumoto does not teach every element as claimed in amended independent claim 10, claim 10 is improperly rejected in light of Matsumoto. Accordingly, claim 10 is in condition for allowance. With respect to claims 12 and 13, which depend from independent claim 10, each of these claims contain all the limitations contained within claim 10 and are therefore also in condition for allowance.

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IV. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1-8, 10, and 12-18, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

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